Riboflavin is an orange-yellow crystalline substance, soluble in water, and is a condensation product of a pentose sugar, ribose, and iso-alloxazine. Before the nature of the sugar was recognized the substance was called lactoflavin, because it was first obtained from milk. It occurs naturally in many foods, specially in liver, kidney, meat, milk, butter, and egg-yolk. Yeast is a rich source of it. In smaller amounts it is found in many other foods. It is believed to act as an enzyme.

Though the foods richest in riboflavin are now restricted in this country it seems likely that the quantities available are sufficient for most people; if it were otherwise the syndrome ariboflavinosis should be more commonly seen. It has been suggested that a daily intake of about 3 mg. is adequate.

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Medical Memoranda

Bilateral Strangulated Femoral Hernia

This condition is rare enough to merit publication of the following case.

CASE REPORT

The patient, a man aged 73, was an old-age pensioner. For four years he had had uncomplicated bilateral femoral hernia, for which he was wearing a truss. He had led a healthy life, but for three months had had a mild degree of constipation. There were no urinary symptoms. Four days before admission he woke up in the middle of the night to find the right-sided hernia hard, painful, and tender. A few hours later he developed colicky lower abdominal pain and began to vomit. The vomiting continued at frequent intervals until, twelve hours before admission, during an attack of retching, the left-sided hernia suddenly became hard and painful.

When examined the patient's condition was poor: he was thin and severely dehydrated; the tongue was dry, brown, and furred; the pulse regular, rate 90; the vessels tortuous and showing signs of gross atherosclerosis. His temperature was 97.9°, and blood pressure 120/90. The abdomen was moderately distended, with visible peristalsis. Both hernias were about the size of golf balls, the right being slightly larger than the left; both were tender, hard, and irreducible. Per rectum the prostate was firm but not enlarged. Before operation a nasal tube was passed and four pints of foul faecal vomit were aspirated.

Operation.—Anaesthetic: 12 c.cm. of hypobaric percaïne with 1 c.cm. of intramuscular veritol. The hernial sac on the right side contained a loop of small bowel, which was dull and dark purple in colour. At the constriction ring its colour was grey. Considerable doubts were felt as to its viability; but it was thought that the risks of resection were greater than those of subsequent perforation, and it was consequently returned to the peritoneal cavity. On the left side the loop of small bowel was strangulated but obviously viable. Radical cure on both sides was effected by Parry's method.

At the end of the operation the patient's condition was poor; the nasal tube was retained *in situ* and aspirated at frequent intervals. An intravenous glucose-saline drip was instituted, the patient receiving three pints in the next twenty-four hours. After this his condition improved; the drip was discontinued and the nasal tube withdrawn. From that time he made an uninterrupted recovery; his bowels were opened on the fourth day, and he was discharged to a convalescent hospital on the twelfth day after operation.

My thanks are due to Mr. John Gilmour for permission to publish this case.

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Reviews

THE INJURED BACK

The Injured Back and its Treatment. Edited by John D. Ellis, M.D. (Pp. 377; illustrated. 30s.) London: Baillière, Tindall and Cox.

This book consists of a series of papers written independently by various authors on one of the most difficult and controversial aspects of modern orthopaedic practice. Sir Arthur Keith contributes an introductory note on the evolution of man's posture. The remainder of the book maintains the same high standard. The authors are all recognized authorities in their particular field. The editor, John D. Ellis, contributes chapters on the routine examination of the injured back, on the relation of trauma to inflammatory and degenerative disease and anomalies of the spine, and on the treatment of minor injuries. Ghormley contributes a chapter on the role of the articular facets in low back pain. Osgood provides an excellent chapter on the relation of faulty body mechanics to back injuries. Neurosurgical aspects of injuries to the back are covered by Loyal Davis and Haven. The problem of backache referred from visceral disease is dealt with by Nathan S. Davis and the management of fractures of the spine by Conwell. Ellis writes: "It is unquestionably a delusion for the examiner to believe, as one is likely to do early in his experience with the study of injured backs, that all patients grossly exaggerate their symptoms or that the complaint of soreness in the back is to a large extent neurasthenic and has no physical basis."

This book is an attempt to differentiate the various types of backache and establish their relation to injury. A commendable feature is the stress laid on considerations of anatomy and pathology, which form the basis of any proper assessment of clinical findings and the basis of any useful rationale of treatment. The whole subject is covered in detail and modern investigations are reviewed most carefully. The bibliography at the end of each chapter is most comprehensive, and this alone makes it a useful book of reference. The reproductions of all x-rays are unusually good, especially those of the intervertebral articulations.

It is pleasing to note that operative procedures are relegated to their proper place and are considered only in relation to the more conservative methods of treatment. "Shot-gun" procedures are condemned, and Ghormley says wisely: "One should never be driven to surgical treatment only because conservative methods have failed."

This book should commend itself to all physicians and orthopaedic surgeons who become exasperated over the diagnosis and treatment of low backache and sciatica. It certainly does not solve all the difficulties so frequent in the management of such cases, but it provides a highly informative and stimulating approach to the subject.

PETTENKOFER AS HYGIENIST

The Value of Health to a City. By Max von Pettenkofer. Two Lectures delivered in 1873. Translated from the German, with an Introduction, by Henry E. Sigerist. (Pp. 52. \$1.00.) Maryland: The Johns Hopkins Press. 1941.

Max von Pettenkofer, who was called to the chair of hygiene at Munich in 1865, was one of the great in his day. In his own domain he was a pioneer, but he also employed his vigorous mind in an edifying diversity of other fields. He explored the hygienic significance of clothing, nutrition, pure air, ventilation, and housing. With C. Voit he carried out a classical investigation of metabolism in respiration. A process for carbon dioxide determination and a test for the bile acids still bear his name. He invented a new amalgam for dentistry, improved the gold assay for coinage, and devised a method for the renovation of paintings. In addition, he ranks as an early exponent of the economics of hygiene. In the two popular lectures entitled *The Value of Health to a City*, which he delivered at Munich in 1873, he estimated that the cost of treatment in sickness, together with the coincident loss of wages through incapacity for work, occasioned an annual loss to the city of Munich of over three million gulden. He took the view that public health measures which could reduce or abolish such losses had a cash value to correspond. This concept of the "currency equivalent" has fitted in well with the practical bent of United States administrators, and it is appropriate that a new translation of